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CARDIAC FUNCTION AND HEART FAILURE

NEW MODEL OF HOME-BASED TELE-ECG-MONITORED CARDIAC REHABILITATION IN PATIENTS WITH HEART FAILURE: EFFECTIVENESS, QUALITY OF LIFE, SAFETY, AND ADHERENCE

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Background Despite proven benefits of cardiac rehabilitation (CR), currently proposed CR models are not acceptable for many heart failure (HF) patients (pts). The purpose of this study was to compare a new model of home-based tele-monitored cardiac rehabilitation based on walking training (HTCR) and a standard cardiac rehabilitation (SCR) based on interval training on cycle ergometer in outpatient facilities.

Methods Study group included 152 HF pts (age 58.1± 9.8 years, NYHA class II - III, EF≤40%) who were randomized to HTCR (n=77) or SCR (n=75) and underwent 8-week CR. The effectiveness of CR was assessed by changes in NYHA class, peak oxygen consumption (pVO2), 6-minute walking test (6-MWT) distance and SF-36 score.

Results Both groups were comparable in terms of demographic and clinical characteristics and medical therapy. CR resulted in a significant improvement of all parameters in both groups (Table). The improvement in NYHA class in HTCR was significantly greater than in SCR (p=0.0031), and the improvement in 6-MWT distance was significantly greater in SCR than in HTCR (p=0.0398).

Safety. In neither group were there deaths, necessity for hospitalization because of HF decompensation.Adherence All pts completed CR in the HTCR group, while 15 pts in the SCR group (20%) discontinued CR.

Conclusions In pts with HF, HTCR is equally effective and provides similar improvement of quality of life compared to SCR, while adherence to CR seems better during HTCR. HTCR may be used as an alternative form of CR in HF pts.

	HTCR			SCR		
	Before CR	After CR	p	Before CR	After CR	p
NYHA class	2.5± 0.5	2.1±0.5	0.0001	2.5±0.5	2.3±0.5	0.002
6-MWT(m)	418±92	462±91	0.0001	399±91	462±92	0.0001
pVO2 (ml/kg/min)	17.8±4.1	19.7±5.2	0.0001	17.9±4.4	19.0±4.6	0.0014
SF-36 (score)	79.3±25.6	70.5±25.4	0.0092	81.6±27.3	69.2±26.4	0.0001